

1 **CLAIMS**

2 We claim:

3 1. A method of decoding and analyzing a barcode comprising
4 the steps of:

5 imaging a barcode with mobile device equipped with a
6 digital camera;

7 enhancing said barcode image using software located on
8 said mobile device;

9 decoding the barcode information from said enhanced
10 barcode image;

11 transmitting said barcode information to a server via
12 a wireless network;

13 processing said barcode information using said server
14 to determine the media content associated with
15 said barcode information; and

16 transmitting said media content to the mobile device
17 via said wireless network.

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19 2. A method of decoding and analyzing a barcode according
20 to Claim 1, wherein said barcode is decoded by said server.

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22 3. A method of decoding and analyzing a barcode according
23 to Claim 1, wherein said barcode is decoded by said mobile
24 device.

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2 4. A method of decoding and analyzing a barcode according
3 to Claim 1, wherein said enhancing of said barcode image
4 comprises at least one of the steps of:

5 correcting said barcode image for skew;

6 correcting said barcode image for yaw;

7 correcting said barcode image for barcode sizing;

8 correcting said barcode image for rotation of said

9 barcode from the normal position;

10 sharpening the pixels in said barcode image; and

11 enhancing the edges of said barcode in said barcode

12 image.

13

14 5. A method of decoding and analyzing a barcode according
15 to Claim 1, wherein said decoding of said barcode comprises
16 the steps of:

17 calculating the number of edges in said barcode image;

18 loading a first symbology library;

19 comparing said number of edges to a predetermined

20 threshold require for said symbology library; and

21 decoding said barcode from said barcode image

22 utilizing said symbology library.

23

1 6. A method of decoding and analyzing a barcode according
2 to Claim 5, wherein a plurality of other symbology
3 libraries are loaded if said number of edges is less than
4 said predetermined threshold.

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6 7. A method of decoding and analyzing a barcode according
7 to Claim 1, wherein said mobile device is at least one of
8 the group consisting of a camera phone, mobile phone, smart
9 phone, PDA, pager, pocket PC or laptop computer.

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11 8. A method of decoding and analyzing a barcode according
12 to Claim 1, wherein said barcode is constructed from at
13 least one of the standardized barcode symbology libraries
14 consisting of the group of UPC-A, UC-E, ISBN, RSS-14, RSS-
15 14E, RSS-14L, Interleaved 2 of 5, EAN/JAN-8, EAN/JAN-13,
16 Code 3, Code 39 Full ASCII, Code 128, PDF417, QR Code, or
17 Data Matrix.

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19 9. A method of decoding and analyzing a barcode according
20 to Claim 1, wherein said media content is a search result
21 of a database constructed from said barcode information.

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1 10. A method of decoding and analyzing a barcode according
2 to Claim 1, wherein said media content transmitted to said
3 mobile device is product information.

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5 11. A method of decoding and analyzing a barcode according
6 to Claim 1, wherein said wireless network is a WAP network.

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8 12. A method of decoding and analyzing a barcode according
9 to Claim 1, wherein said barcode information is transmitted
10 to said server via a SMS message.

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12 13. A method of decoding and analyzing a barcode according
13 to Claim 1, wherein said barcode information is transmitted
14 to said server via a MMS message.

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16 14. A system for decoding and analyzing a barcode
17 comprising:

18 at least one machine readable barcode;

19 at least one mobile device equipped with a digital
20 camera for imaging said barcode, wherein said
21 mobile device decodes the barcode information
22 from said barcode image;
23 a wireless network; and

1 a server for receiving and processing said barcode
2 information via said wireless network, wherein
3 said server transmits media content to said
4 mobile device after processing said barcode
5 information.

6
7 15. A system for decoding and analyzing a barcode
8 according to Claim 14, wherein said mobile device enhances
9 said barcode image by performing the steps of:

10 correcting said barcode image for skew;
11 correcting said barcode image for yaw;
12 correcting said barcode image for barcode sizing;
13 correcting said barcode image for rotation of said
14 barcode from the normal position;
15 sharpening the pixels in said barcode image; and
16 enhancing the edges of said barcode in said barcode
17 image.

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19 16. A system for decoding and analyzing a barcode
20 according to Claim 14, wherein said decoding of said
21 barcode by said mobile device comprises the steps of:
22 calculating the number of edges in said barcode image;
23 loading a first symbology library;

1 comparing said number of edges to a predetermined
2 threshold require for said symbology library; and
3 decoding said barcode from said barcode image
4 utilizing said symbology library.
5

6 17. A system for decoding and analyzing a barcode
7 according to Claim 16, wherein a plurality of other
8 symbology libraries are loaded by said mobile device if
9 said number of edges is less than said predetermined
10 threshold.
11

12 18. A system for decoding and analyzing a barcode
13 according to Claim 14, wherein said mobile device is at
14 least one of the group consisting of a camera phone, mobile
15 phone, smart phone, PDA, pager, pocket PC, desktop, or
16 laptop computer.
17

18 19. A system for decoding and analyzing a barcode
19 according to Claim 14, wherein said barcode is constructed
20 from at least one of the standardized barcode symbology
21 libraries consisting of the group of UPC-A, UC-E, ISBN,
22 RSS-14, RSS-14E, RSS-14L, Interleaved 2 of 5, EAN/JAN-8,
23 EAN/JAN-13, Code 3, Code 39 Full ASCII, Code 128, PDF417,
24 QR Code, or Data Matrix.

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2 20. A system for decoding and analyzing a barcode
3 according to Claim 14, wherein said media content is a
4 search result of a database constructed from said barcode
5 information.

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7 21. A system for decoding and analyzing a barcode
8 according to Claim 14, wherein said media content
9 transmitted to said mobile device is product information
10 about said manufactured good.

11

12 22. A system for decoding and analyzing a barcode
13 according to Claim 14, wherein said wireless network is a
14 WAP network.

15

16 23. A system for decoding and analyzing a barcode
17 according to Claim 14, wherein said barcode image is
18 transmitted to said server via a MMS message.

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20 24. A system for decoding and analyzing a barcode
21 according to Claim 14, wherein said barcode information is
22 transmitted to said server via a MMS message.

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1 25. A system for decoding and analyzing a barcode
2 according to Claim 14, wherein said mobile devices utilizes
3 an operating system from the list consisting of Symbian OS,
4 Java, embedded VC++, Windows CE, and Palm OS.